

Material Safety Data Sheet

Creation Date 07-Apr-2009

Revision Date 04-Jan-2013

Revision Number 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Boric acid

Cat No. AC315180000, AC315181000, AC315185000; AC315180000;

AC315181000; AC315185000

Synonyms Boracic acid; Orthoboric acid.; Hydrogen borate

Recommended Use Laboratory chemicals

Company Entity / Business Name

Fisher Scientific Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410 Fair Lawn, NJ 07410

Emergency Telephone Number
For information in the U.S. call: 001-

For information in the US, call: 001-800-

ACROS-01

For information in Europe, call: +32 14 57 52

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Emergency Number, Europe: +32 14 57 52 99 Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-

424-9300

CHEMTREC Phone Number, Europe: 001-

703-527-3887

2. HAZARDS IDENTIFICATION

WARNING!

Tel: (201) 796-7100

Emergency Overview

May cause harm to the unborn child. May impair fertility. Irritating to eyes and skin. May cause central nervous system effects.

Appearance WhitePhysical StatePowder Solidodor odorless

Target Organs Eyes, Skin, Central nervous system (CNS), Reproductive System, Liver, Kidney, Blood

Potential Health Effects

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Acute Effects

Principle Routes of Exposure

Eyes Irritating to eyes.

Irritating to skin. May be harmful in contact with skin. Chronic exposure may cause dermatitis. Skin Inhalation

May be harmful if inhaled. Inhalation may cause central nervous system effects. May cause

irritation of respiratory tract.

May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting Ingestion

and diarrhea.

Chronic Effects Adverse reproductive effects have occurred in humans.. May impair fertility. May cause harm

to the unborn child. May cause adverse liver effects. May cause adverse kidney effects.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Boric acid (H3BO3)	10043-35-3	>95

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain

medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation

if victim ingested or inhaled the substance; induce artificial respiration with a respiratory

medical device. Get medical attention immediately if symptoms occur.

Do not induce vomiting. Call a physician or Poison Control Center immediately. Ingestion

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point No information available. Method No information available.

Autoignition Temperature No information available.

Explosion Limits

Upper No data available No data available Lower

Suitable Extinguishing Media Substance is nonflammable; use agent most appropriate to

extinguish surrounding fire..

Unsuitable Extinguishing Media No information available.

Hazardous Combustion Products No information available.

Sensitivity to mechanical impact Sensitivity to static discharge

No information available. No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Health 2 Flammability 0 Physical hazards N/A Instability 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not

get in eyes, on skin, or on clothing.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust Up formation.

7. HANDLING AND STORAGE

Handling Use only under a chemical fume hood. Wear personal protective equipment. Avoid dust

formation. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not ingest.

Keep containers tightly closed in a dry, cool and well-ventilated place. Storage

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are **Engineering Measures**

close to the workstation location.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Boric acid (H3BO3)	TWA: 2 mg/m ³		
	STEL: 6 mg/m ³		

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Boric acid (H3BO3)			TWA: 2 mg/m ³
, , ,			STEL: 6 mg/m ³

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Wear appropriate protective gloves and clothing to prevent skin exposure. Skin and body protection

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical StatePowder SolidAppearanceWhiteodorodorless

Odor ThresholdNo information available.pH3.8-4.8 33 g/l aq.sol.Vapor Pressure2.7 mbar @ 20 °CVapor DensityNo information available.ViscosityNo information available.Boiling Point/RangeNo information available.

Melting Point/Range 169°C / 336.2°F

Decomposition temperature100 °CFlash PointNo information available.Evaporation RateNo information available.Specific GravityNo information available.SolubilityPartly soluble in waterlog PowNo data available

Molecular Weight61.83Molecular FormulaH3 B O3

10. STABILITY AND REACTIVITY

Stability Moisture sensitive.

Conditions to Avoid Incompatible products. Excess heat. Avoid dust formation.

Exposure to moisture.

Incompatible Materials Strong oxidizing agents, Strong bases

Hazardous Decomposition Products Carbon monoxide (CO₂), Oxides of boron

Hazardous Polymerization Hazardous polymerization does not occur

Hazardous Reactions . None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation (Dust)	
Boric acid (H3BO3)	2660 mg/kg (Rat)	2000 mg/kg (Rabbit)	>2.03 mg/L (Rat) 4 h	

Irritation Irritating to eyes and skin

Toxicologically Synergistic

Products

No information available.

Chronic Toxicity

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

Sensitization No information available.

Mutagenic Effects Mutatagenic effects have occured in microorganisms.

Reproductive Effects Adverse reproductive effects have occurred in humans..

Developmental Effects May cause harm to the unborn child. Developmental effects have occurred in experimental

animals.

Teratogenicity Teratogenic effects have occurred in experimental animals..

Other Adverse Effects The toxicological properties have not been fully investigated.. See actual entry in RTECS for

complete information.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Boric acid (H3BO3)	Not listed	Gambusia affinis: LC50: 5600	Not listed	115 - 153 mg/L EC50 48 h
		mg/L/96h		_

Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available

Mobility

Component	log Pow
Boric acid (H3BO3)	-0.757

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a

hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

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DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Boric acid (H3BO3)	Х	Χ	-	233-139-	-		Х	Χ	Χ	Χ	Χ
				2							

Legend:

- X Listed
- E Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P Indicates a commenced PMN substance
- R Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
- Y1 Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

Not applicable

Clean Air Act

Not applicable

OSHA

Not applicable

CERCLA

Not Applicable

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

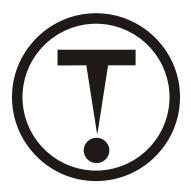
Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2A Very toxic materials D2B Toxic materials



16. OTHER INFORMATION

Prepared By Regulatory Affairs

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Email: EMSDS.RA@thermofisher.com

Creation Date 07-Apr-2009

Print Date 04-Jan-2013

Revision Summary (M)SDS sections updated 1 3

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS